STATE OF UTAH—DEPARTMENT OF SOCIAL SERVICES

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DIVISION OF HEALTH
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SALT LAKE CITY, UTAH 84113
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328-6146

LYMAN J. OLSEN, M.D., M.P.H.
Director of Health

Board of Health
Air Conservation Committee
Health Facilities Council
Medical Examiner Committee
Nursing Home Advisory Council
Water Pollution Committee

BUREAU OF ENVIRONMENTAL HEALTH
72 East 4th South
Salt Lake City, Utah

April 4, 1975

Raymond Green, M.D.
Health Officer
State Division of Health
Uintah County Courthouse
Vernal, Utah 84078

Dear Dr. Green:

Enclosed is a copy of the Interim Primary Drinking Water Standards as proposed by the Environmental Protection Agency (EPA) pursuant to Public Law 93-523 (Safe Drinking Water Act). These are the standards that are intended to be promulgated before June 16, 1975 and will become effective eighteen (18) months after the date of their promulgation. These standards and other regulations that will be forthcoming will have a great impact on the management, operation, and construction of public water systems in Utah.

We ask that you review these standards and make any comments you feel appropriate. Comments can either be sent to EPA directly or to this office to be forwarded to EPA with our comments. Special attention should be given to the monitoring and sampling frequencies as well as the reporting and notification requirements. Please submit any comments to this office prior to May 1, 1975 or to EPA prior to the May 16, 1975 deadline.

It is the intention of the Division of Health to assume the primary enforcement and regulation responsibility as currently exists under State law.

Very truly yours,

Richard C. Hansen

Richard C. Hansen
Assistant Director
Bureau of Water Quality

SES:ndp

federal register

FRIDAY, MARCH 14, 1975

WASHINGTON, D.C.

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PART II

ENVIRONMENTAL PROTECTION AGENCY

■

INTERIM PRIMARY DRINKING WATER STANDARDS

ENVIRONMENTAL PROTECTION AGENCY

[40 CFR Part 141]

[FRL 343-8]

PRIMARY DRINKING WATER

Proposed Interim Standards

Notice is hereby given that pursuant to sections 1412, 1414, 1415 and 1450 of the Safe Drinking Water Act ("the Act," Pub. L. 93-523) the Administrator of the Environmental Protection Agency (EPA) proposes to issue a new 40 CFR Part 141 setting forth interim primary drinking water standards (Subpart A) and regulations governing the granting of variances and exemptions from those standards (Subpart B). The proposed regulations set forth below cover only the interim primary standards. Proposed regulations dealing with the granting of variances and exemptions will be published shortly.

The Act was signed by the President on December 16, 1974. It is the first Federal Act dealing in depth with providing safe drinking water for public use. The standards proposed today are the first regulations to be published as part of EPA's implementation of this new major environmental legislation. Under section 1412(a)(1) of the Act, EPA is obligated to publish proposed standards within 90 days after enactment, and promulgation of final standards is required 180 days after enactment. Those standards become effective 18 months after the date of their promulgation.

The Act clearly contemplates that the States, rather than the Federal government, will have primary responsibilities for carrying out the purposes of the legislation. Thus, when a State demonstrates that it has the authority and capability to carry on a program consistent with the Act, the Federal government will recognize the State's primary enforcement responsibilities and will thereafter play largely a passive role in assuring safe drinking water in that State. Under section 1413(a)(1) of the Act a State has primary enforcement responsibility if the Administrator has determined that such State—

(1) Has adopted drinking water regulations which

(A) In the case of the period beginning on the date the National Interim Primary Drinking Water Regulations are promulgated under section 1412 and ending on the date such regulations take effect are no less stringent than such regulations, and

(B) In the case of the period after such effective date are no less stringent than the interim and revised national primary drinking water regulations in effect under such section;

(2) Has adopted and is implementing adequate procedures for the enforcement of such State regulations, including conducting such monitoring and making such inspections as the Administrator may require by regulation;

(3) Will keep such records and make such reports with respect to its activities under paragraphs (1) and (2) as the Administrator may require by regulation;

(4) If it permits variances or exemptions, or both, from the requirements of its drinking water regulations which meet the requirements of paragraph (1), permits such variances and exemptions under conditions and in a manner which is not less stringent than the conditions under, and the manner in, which variances and exemptions may be granted under sections 1415 and 1416; and

(5) Has adopted and can implement an adequate plan for the provision of safe drinking water under emergency circumstances.

The Administrator shall, by regulation (proposed within 180 days of the date of the enactment of the Act, prescribe the manner in which a State may apply to the Administrator for a determination that the requirements of paragraphs (1), (2), (3), and (4) of subsection (a) of section 1413 of the Act are satisfied with respect to the State, the manner in which the determination is made, the period for which the determination will be effective, and the manner in which the Administrator may determine that such requirements are no longer met. Such regulations shall require that before a determination of the Administrator that such requirements are met or are no longer met with respect to a State may become effective, the Administrator shall notify such State of the determination and the reasons therefor and shall provide an opportunity for public hearing on the determination. Such regulations shall be promulgated (with such modifications as the Administrator deems appropriate) within 90 days of the publication of the proposed regulations in the FEDERAL REGISTER. The Administrator shall promptly notify in writing the chief executive officer of each State of the promulgation of regulations under this paragraph. Such notice shall contain a copy of the regulations and shall specify a State's authority under this title when it is determined to have primary enforcement responsibility for public water systems.

(2) When an application is submitted in accordance with the Administrator's regulations, the Administrator shall within 90 days of the date on which such application is submitted

(A) Make the determination applied for, or

(B) Deny the application and notify the applicant in writing of the reasons for his denial.

Within 180 days after enactment EPA is required to propose regulations which prescribe the manner in which a State may apply to the Administrator for a determination that it has met the criteria for operation of a safe drinking water program.

A principal concern of EPA in determining the scope, stringency, and timing of the proposed interim drinking water regulations is the burden they will impose and its implications for the workability of the regulations. The Act assigns a predominant role to the States. EPA recognizes that decisions to implement these regulations on the part of most States must be a reasonable probability. The willing cooperation of subordinate levels of government, public utilities and others is also necessary. In this regard, commenters are urged to keep in mind the levels of dollar resources and other assistance that can be expected from EPA to support States, local government and other participants in carrying out the Act. EPA's budget request for grants to States for public water system supervision programs in FY 1976 is $7,500,000. EPA personnel resources and other financial resources will be made available, particularly to assist the States in setting up and operating programs, to the extent possible, but this support will necessarily be limited and the States and utilities will need to allocate funds to implement the program.

EPA has provided for phasing in the testing requirements in the presently proposed regulations. In its regulations governing the requirements for State programs to qualify for primary enforcement responsibility EPA will allow considerable leeway in the time-phasing of programs, and will permit considerable variation and flexibility in State approaches to enforcement. Even so, many impacts and duties will fall upon the States as soon as these regulations are effective eighteen months after promulgation. Enforcement requests and citizens suits must be anticipated to commence then. Calls for State assistance to localities and utilities, including extensive laboratory services and approval of laboratories, assistance in upgrading performance and other services, will escalate. Violations of the regulations by suppliers of water will become immediately apparent with the operation of section 1414(c) of the Act and § 141.32 of the regulations as to public notification. A flow of applications for variances and exemptions will begin.

With these considerations in mind, yet recognizing the overriding consideration of improving protection of public health through assuring compliance with the standards set forth in these regulations, EPA must fix the maximum contaminant levels and other requirements called for in the interim regulations. On the many aspects of this most important issue involving the appropriate balance of health protection and realistic implementation of the program, EPA requests public analysis and comment.

The Interim Primary Drinking Water Standards proposed today protect health to the extent feasible, taking costs into consideration, using technology, treatment techniques and other means generally available. The Act in section 1401 requires that for each primary drinking water contaminant the Administrator specify either a maximum contaminant level if it is feasible to ascertain that level in water, or, a treatment technique which leads to a sufficient reduction in the level of such contaminant if it is not feasible to ascertain that level. Based on past monitoring experience for these levels, the Administrator has determined that it is economically and technologically feasible to monitor drinking water for contaminants at the maximum contami-

nant levels. Therefore, required treatment techniques will not be a part of these interim primary standards. However, EPA welcomes comment on this issue and if public comment justifies it, EPA will consider issuing treatment techniques in lieu of maximum contaminant levels for one or more of the contaminants covered in the regulations.

The interim primary standards proposed today are based largely on the 1962 Public Health Service Drinking Water Standards and the review of those standards accomplished by the EPA Advisory Committee Report on the Revision and Application of the Drinking Water Standards, as recommended to the Administrator, on September 20, 1973.

The Act in section 1412(b) provides that revised primary drinking water standards are to be proposed (and promulgated within 180 days thereafter) 100 days following the date of the report on the study to be conducted by the National Academy of Sciences on recommended health-based maximum contaminant levels. This report is due no later than December 16, 1976. In turn, the revised primary regulations will be effective 18 months following the date of their promulgation. While it is anticipated that changes will be made in some of the maximum contaminant levels of the interim primary standards, that there will be contaminants added to the list of regulated substances, and that broad groupings of contaminants (such as organics) will be further defined, the revised standards will not automatically supersede the interim standards. Only if the revised regulations expressly revoke the interim standards will the latter no longer be effective. In determining whether the revised regulations will supersede, the Administrator will consider the length of time they have been in effect, and the compatibility of the compliance strategies and techniques for meeting interim and revised regulations. If all or part of the interim regulations remain in effect, the water supplier will be required to meet both sets of standards sequentially.

Definitions and coverage. To determine whether these standards apply to a particular system, reference must be made to both §§ 141.2 and 141.3 of the regulations. The term "public water system" is defined in § 141.2(e) to mean a system which serves at least fifteen service connections or at least twenty-five individuals on a regular basis. Public water systems which otherwise would be covered by the Act are not required to meet these standards if they serve 25 or more people but only for less than three months out of the year. The intent is to cover campgrounds and resort facilities which may serve for at least three months a substantial population. Although a supplier of drinking water must comply with all requirements of the Act when he is providing water, he need not monitor, make reports, etc., while the system is not operating or when it is regularly providing water to fewer than twenty-five individuals.

For a public water system to be excluded from coverage by these regulations it must meet all four criteria set out by § 141.3.

The broad definition of "State" in § 141.2(f) is intended to make clear that the State government is the primary enforcement authority if the State has assumed this authority under section 1413 of the Act; if not, the Regional Administrator of EPA is the primary enforcement authority. The only exception is found in § 141.31 (Reporting Requirements), where the Federal Agencies are required to report results of analyses to the Regional Administrator even when the State has assumed primary enforcement responsibility.

Maximum contaminant levels. The maximum contaminant levels for Arsenic, Barium, Cadmium, Chromium, Cyanide, Fluoride, Lead, Selenium and Silver are identical to the 1962 Drinking Water Standards (section 5.22). With the exception of nitrates, all of the maximum contaminant levels for inorganic chemicals are based upon data addressed to possible health effects that may occur after a lifetime of exposure, and the standards have been reviewed in light of substantial information generated since the publication of the 1962 Standards. More complete summaries of the bases for these standards are contained in the Statement of Basis and Purpose.

Special attention is invited to the cadmium standard. Recent evidence has established that cigarette smoking may contribute as much or more cadmium to the body burden as does the ingestion of cadmium with food. The standard for cadmium proposed today does not take into account the additive effect of cadmium ingestion from smoking. EPA invites comments as to the question whether the cadmium standard should be directed specifically toward protection of smokers as well as non-smokers.

Only a small fraction of the mercury in drinking water is in the alkyl form, which is considered more toxic than other forms of mercury. Alkyl mercury has only been detected in water in the nanogram per liter range. However, the proposed standard for mercury is derived on the assumption that all mercury in water is methyl mercury. Public comment is solicited as to whether or not this procedure is reasonable. Possible alternatives include:

a. Setting the standard on the assumption that all the mercury in the water is methyl mercury, but requiring that the total mercury concentration be below the specified level,

b. Leaving the standard at the present level to protect against the toxic effects of methyl mercury, but specify that the standard applies only to that form, or

c. Establishing two standards—one for organic and one for inorganic mercury.

The maximum contaminant level for organic chemicals (§ 141.12) is determined by the Carbon Chloroform Extract (CCE) procedure employing the low flow Carbon Adsorption Method (CAM-low flow) sampler. The present interim primary standard (0.7mg/1–CAM-low flow) is substantively equivalent to the 1962 Standard (0.2 mg/1–CAM-high flow). The low flow CAM sampler provides longer contact time between the water sample and the activated carbon and therefore, has 3½ times greater extraction efficiency.

EPA is conducting several monitoring surveys (including the National Reconnaissance Survey of drinking water supplies mandated by the Act) to determine the extent of the incidence of organic chemicals in drinking water and associated toxicity of those substances. Revised standards will reflect the results of those studies.

The pesticide contaminants listed in the proposed regulations issued today were not contained in the 1962 Standards. The maximum contaminant levels for these substances have been derived from the recent data on effects of acute and chronic exposure to both organochlorine and chlorophenoxy pesticides.

The list of pesticide contaminants does not include Aldrin/Dieldrin and DDT because the Agency is presently conducting an intensive nationwide survey to determine the extent of the contamination of the drinking water by these persistent pesticides. This program is to be completed within the next few months, and subsequently the Agency will propose interim primary drinking water standards for Aldrin/Dieldrin and DDT. Almost all uses of DDT were cancelled under the Federal Insecticide, Fungicide and Rodenticide Act, 7 U.S.C. 136 et seq., on March 18, 1971, and the Agency has suspended the major uses of Aldrin/Dieldrin (October 1, 1974, 39 FR 37272). (This suspension is presently on appeal to the United Statese Court of Appeals for the District of Columbia Circuit, Nos. 74–1924, 74–2113, and 74–2114). A factor in both actions was evidence that those pesticides are potential carcinogens. The interim primary drinking water standards for these chemicals will take this evidence of carcinogenicity into account.

The Administrator has also issued a notice of intent to cancel many of the major uses of heptachlor and chlordane, which are included in these standards. Heptachlor epoxide, though not a product directly applied as a pesticide, results from the use of heptachlor or chlordane. Preparations are underway for presentation at an adjudicatory hearing the evidence relating to the carcinogenic risks associated with the use of heptachlor and chlordane. It is anticipated that the maximum contaminant levels for heptachlor, chlordane, and heptachlor epoxide—which are based on chronic human toxicity other than carcinogenicity—will be reviewed within the next several months and may be revised to reflect the cancer risk which may be inherent in their presence in drinking water.

In planning new or expanded water supply systems in the next few months, owners should be aware that the National Academy of Sciences, and National Academy of Engineering in "Water Quality Criteria," 1972, have recommended that the following concentra-

tions not be exceeded in sources of water to be used for drinking water:

Aldrin	0.001 mg/l
DDT	0.05 mg/l
Dieldrin	0.001 mg/l

It is unlikely that EPA will issue interim primary drinking water standards which permit concentrations in finished water in excess of these values.

Organophosphate insecticides have been considered for inclusion in these standards. However, there are not sufficient data related to their occurrence in drinking water or raw water sources to warrant setting standards at this time. Although these substances are widely used in agriculture, they are not usually intentionally added to watercourses; the possible pathways to water supplies are indirect, such as through percolation, runoff from treated lands, and accidental spills. Many organophosphate insecticides are almost completely degraded within days in water partially explaining the fact that the intact organophosphates are seldom detected in water.

It must be emphasized, however, that most organophosphate insecticides are Class I poisons. Therefore, authorities should be cautioned that accidental spills or misuse of these substances might demand immediate attention similar to that required with any type of acute acting contaminant that enters our nation's water. The use of section 1431 of the Act, or State law modeled upon it, may also be appropriate in such situations. A guidance manual entitled "Policies and Procedures for Review and Evaluation of Toxicity in Drinking Water of Chemicals other than Coagulant Aids" is available for use in these situations from the Water Supply Research Laboratory, National Environmental Research Center, U.S. Environmental Protection Agency, 4676 Columbia Parkway, Cincinnati, Ohio 45268.

The interim primary drinking water standards proposed today have a limit for turbidity (§ 141.14) because turbidity in water interferes with disinfection efficiency and because high turbidity often signals the presence of other health hazards. The growth of microorganisms in a distribution system is often stimulated if excessive particulate or organic matter is present. The supplier is allowed to have no greater than five turbidity units in the water (rather than one) when he can show that an effective disinfectant agent is present in the system in sufficient concentrations to protect the water users.

The standards for microbiological contaminants are contained in § 141.15. The maximum levels are in terms of the surrogate coliform bacteria, although the purpose of the standard is to protect against disease-causing bacteria, viruses, protozoa, worms and fungi. The analytical procedures for direct detection of these microorganisms are not well enough developed nor practicable for widespread application at this time. Total coliform counts have been used for nearly 100 years as indicators because the organisms are present in large quantity in the intestinal tracts of humans and other warm blooded animals, thus the number remaining in a water supply provides a good correlation with sanitary significance.

To ease the economic burden on the smaller systems, these standards provide in § 141.16 that chlorine residual concentrations may be measured and substituted for a portion of the bacteriological samples. This alternative is based on the assumption that chlorine in proper concentrations will destroy those organisms which are indirectly being measured by the coliform test. Small systems (serving 4900 or fewer people) may make a total substitution, but it should be noted that several chlorine samples are required for each substituted microbiological sample, and a higher chlorine residual must be maintained in the system.

Interim Primary Drinking Water Standards for radiological substances are not included in the regulations proposed today. The Agency intends to publish proposed radiological maximum contaminant levels and analytical and sampling requirements in the near future.

Almost all of the maximum contaminant levels are based on an assumed consumption of two liters of water per day. The question arises, however, as to whether or not it is reasonable to derive the drinking water standards on the basis of the average amount of water consumed by any large segment of the population (in the case of these standards, young adult American males) since a large portion of the members of that class consume more.

EPA solicits information as to whether or not the present approach is reasonable, and whether there is any available information regarding the distribution of water consumption levels by significant segments of the American public.

Sampling and analytical requirements. Sections 141.21–141.24 set out the sampling and analytical requirements to be followed in determining whether there is compliance with the maximum contaminant levels. Section 141.21 establishes the monitoring frequency for the microbiological contaminants. When there is an apparent violation noted, the supplier is directed to accelerate the sampling from the same monitoring point until the results indicate that the maximum contaminant level is no longer exceeded. The requirement to step up the monitoring is not in lieu of the reporting and notification responsibilities which arise when there is a violation. Also, the "check samples" required by § 141.21(c)(1)–(c)(3) are not to be included in the calculations of the total samples taken each month for the purposes of determining compliance with § 141.21(b).

A violation of § 141.16 is deemed to occur when a second properly conducted test, which must be run within one hour of the first test, shows that the chlorine concentration is below the specified level. The required sample for coliform analysis must be taken at the point where the violation in the chlorine residual was detected.

The sampling frequency for turbidity determination (§ 141.22) differs for supplies drawing water from underground sources and for surface water supplies. It is presumed that the likelihood of high turbidity in water from underground sources is relatively small.

Section 141.23 sets forth the requirements for inorganic chemical sampling and analyses. Within one year from the effective date of this subpart the supplier must make one analysis for inorganic chemicals; subsequent analyses must be performed yearly if the system does not primarily serve transients. Less frequent analyses are required for suppliers drawing water from underground sources. If this level of an inorganic chemical is greater than 75 percent of the maximum contaminant level, the supplier is directed to re-analyze monthly.

The sampling frequencies for the inorganic chemicals, organic chemicals and pesticides allows considerable time within which the supplier may take the first sample, due to the limited number of laboratories capable of making the often difficult analyses. Public water suppliers are encouraged to begin monitoring for these substances even before the effective date of this subpart. Any analyses made in accordance with the analytical procedures set forth in this subpart but before the effective date can be considered when determining compliance with §§ 141.23 and 141.24.

To assure confidence in analytical results, which in many cases the public water suppliers will contract for, a section has been added to provide for laboratory certification (§ 141.27).

Reporting requirements. A key provision of these proposed standards is the reporting requirement (§ 141.31). Within 40 days following an analysis required by subpart A, the results must be reported to either the State or the Regional Administrator, depending on who has primary enforcement responsibility.

Federal Agencies will at all times report to the Regional Administrator, although they must follow State agency substantive standards if the State agency has assumed primary enforcement responsibility.

If a standard is based upon averaging of samples, the report must be filed within 40 days of the first sample used in the averaging. If there is a violation, whether based on averaging or a single analysis with one check analysis, the report must be received within 36 hours of the finding of violation. The reports of violations of the standards include reports of instances where the monitoring requirements have not been followed.

One of the basic assumptions embodied in the Safe Drinking Water Act is that if the public is aware that the drinking water being provided is below Federal Standards, they will request the local officials to remedy the situation. Thus § 141.32 of these Standards is intended to carry out the statutory directive that the public served by the public water system be adequately informed of the quality of the water they are receiving. The supplier must give notice of

failure to meet the requirements of § 141.32 by publication in a newspaper or newspapers, by promptly giving a copy of the notice to the TV and radio stations serving the area, and by inclusion of the notice in the water bills. Failure to follow the required monitoring requirements is deemed a violation equal to failure to meet a maximum contaminant level.

Public water suppliers are allowed as part of the notice to the public to give fair explanation of the public health significance of any violation, or of any variance or exemption, which the supplier must report as required by subsection (b) of § 141.31.

The Agency anticipates that additions may be made to the public notification provision to differentiate between the type of notice required in the case of emergencies and that provided for in § 141.31.

Siting requirements. The siting requirements of § 141.41 are designed to assure that, to the extent practicable, the location of the intake and other elements of new or expanded water supply systems will be such that the public water systems will be able to provide a continuous supply of healthful drinking water. To the extent practicable, facilities should be located in areas not subject to floods, earthquakes, fires, or other disasters. Section 141.41 is not intended to give EPA veto authority over new public water systems, although State agencies may have this power. In all cases there must be notification of the State or Regional Administrator that construction of a new or expanded system is contemplated.

Economic, energy, and chemical considerations. Economic, energy, and chemical factors have been considered in the development of the Proposed Interim National Primary Drinking Water Standards. In establishing the phased monitoring schedule, the maximum contaminant levels themselves, and the notification requirements, every effort has been made to identify costs and to keep them within the bounds contemplated by Congress.

The estimates contained herein are based on data currently available and should be considered preliminary. The data include the 1969 Community Water Supply Study published by the U.S. Public Health Service in July 1970. In addition, EPA has also conducted several pilot studies of water supplies of several Federal agencies, i.e., U.S. Forest Service, Corps of Engineers, Bureau of Reclamation, National Park Service, and Interstate Highways to evaluate the status and condition of supplies serving the travelling public. Until EPA's inventory of community water supplies is completed and adequate data are obtained on the capability of each system, the full impact of these proposed interim regulations will not be known. EPA is undertaking a more comprehensive analysis of the overall impact of the proposed standards and does expect to have more definitive estimates to present when it promulgates the interim standards. EPA expects and invites comments on the economic impact of these regulations in order that the final regulations presented are both reasonable and practical.

The preliminary cost estimates do not appear excessive or inflationary. The estimated replacement value of the 40,000 community (resident) water systems is $125 billion; annual monitoring costs for the community water systems would be less than 0.02 percent of this value and capital costs to bring the systems up to compliance levels would be about 1 percent of this value.

Estimated costs are based on the needs of 40,000 systems serving resident populations and 200,000 supplies serving non-resident populations. These costs, however, relate only to the construction and operation of facilities to enable water supply systems to meet the health related constituent limits that are established in these Interim Primary Regulations. This excludes any costs to provide for growth of population served and to provide for the removal of taste and/or odor problems or any other aesthetic desires. The monitoring costs for all community supplies are estimated to be $20 million the first year and to increase to $30 million after 5 years. Costs during intervening and subsequent years will vary slightly due to phasing and annual frequency of monitoring requirements. Capital costs for upgrading these systems are estimated to be about $1,400 million, which will result in an annual cost of $365 million.

For the supplies serving non-resident populations, monitoring costs will vary from $45 million the first year to $60 million the fifth year. The capital cost for upgrading these systems will be approximately $6 million. It should be noted that the other (non-resident) capital costs relate only to those pertaining to meeting only the proposed bacteriological limits. Most of the chemical limits in the proposed regulations were set with a view to chronic effects resulting from lifetime exposures. Since these systems serve a transient population, the need to attain the proposed chemical limits may be questionable. The economic consequences could impose severe hardship on these small systems and the granting of variances and exemptions by the States may be justified. No effort was made to calculate the annual cost related to these systems, since operating and maintenance costs are not known at this time.

The implementation costs are summerized in the following table:

[Dollars in millions]

Annual monitoring	Community (resident)	Other (Non-residential)	Total
Costs:			
1st year	$20	$45	$65
5th year	30	60	90
Upgrading costs:			
Capital costs	1,400	6	.....
Annual costs	[1] 365	.....	.....

[1] Includes operation and maintenance.

Health costs have not been included in these estimates, although improved water quality will undoubtedly have a beneficial effect on health costs. Studies are underway to determine these costs, and they will be integrated as soon as possible.

It should be noted that the total annual monitoring costs do give credit to the bacteriological monitoring that is being performed today. For example, 700 of the estimated 40,000 community water systems are currently subject to Federal purview, under the interstate quarantine regulations of the Public Health Service Act. These systems, which include many of the major cities in the country, serve a resident population of 85 million, or more than half of the population served by community systems. For these systems bacteriological monitoring is now adequate and in fact some chemical monitoring is also being performed.

A potential major cost-reducing factor not included in these figures is expanded control by EPA over effluents of the listed contaminants. EPA is currently examining the implications of controlling pollutants at the source of discharge into the water. In effect, by controlling the pollutants at their source, EPA will be reducing the direct economic burden on the public sector.

The energy requirements to operate the added facilities and to produce the chemicals for clarification (alum, lime, etc.) constituent removal (sulfuric acid, activated carbon, etc.) and disinfection are estimated at 21 billion BTU's annually or .025 percent of the current estimate for the 1975 national energy consumption of 80 quadrillion BTU's.

The chemical requirements related to the additional treatment required by the proposed standards are summarized below:

Chemical requirements

Chemical	Pounds (10)	Percent of annual production
Filter grade alum	370	16 (1973)
Activated carbon	7	4 (1972)
Lime	421	1 (1972)
Chlorine gas	167	0.8 (1973)
Sulphuric acid	473	0.8 (1973)
Sodium hydroxide	77	0.4 (1973)

Alum and activated carbon will apparently require significant portions of current total production. These chemicals are used in large part for water treatment and the raw materials are abundant. Therefore it is not believed that significant problems will be involved in increasing their production in the long term.

Impact on State Programs. With particular regard to the potential impact of the proposed regulations on State programs, EPA is anxious to have comprehensive comments and data on costs and administrative burden generally, as well as on feasibility of State program implementation in light of dates scheduled for the effectiveness of the regulations. Specifically, EPA requests data to show

the costs to the States that will follow from the testing requirements imposed by these regulations on public water systems, from the requirement that public water systems report test results to the States, and from the requirement that tests must be conducted by laboratories approved by the States. EPA will consider such cost information as is supplied prior to promulgating final Interim Primary Drinking Water Standards as well as considering such data and information in the development of proposed State Program regulations, section 1421, which is scheduled for issuance in mid June 1975.

Comments and public hearings. EPA presented draft Interim Primary Drinking Water Standards to the National Drinking Water Advisory Council established pursuant to section 1446 of the Act. At a meeting held February 26 and 27, 1975, the Council made recommendations with respect to these standards and to the extent deemed appropriate, changes have been made in view of these recommendations.

Interested persons may participate in this rulemaking process by submitting written comments in triplicate to the Water Supply Division (WH-450), Environmental Protection Agency, Washington, D.C. 20460, Attention: Comment Clerk, Interim Primary Drinking Water Standards.

Comments on all aspects of the proposed regulations are solicited. All comments received on or before May 16, 1975, will be considered. If the comments are criticisms of the adequacy of data relied upon by EPA, the comments should identify and, if possible, provide additional data from published literature and the individual should indicate why and how this information should be used.

Copies of the Statement of Basis and Purpose for these Proposed Interim Primary Standards and other relevant documents will be available after March 16, 1975, from the EPA Freedom of Information Center, Room 206, West Tower, Waterside Mall, 401 M Street, SW, Washington, D.C. 20460, Attention: Rubye Mullins. A copy of all public comments and transcripts of the public hearings will be available for inspection and copying from the EPA Freedom of Information Center. For public review and copying, the EPA Information Regulation (40 CFR Part 2) provides that a reasonable fee may be charged for the copying service.

In addition to considering public comments sent to EPA, the Agency will hold public hearings at the following locations, to receive comments and statements. Persons who wish to make statements at these sessions are urged to submit written copies of their remarks in triplicate at the time they are presented for inclusion in the record. Persons wishing to attend are also urged to confirm by telephone the exact location of the hearing.

April 15, 1975 9:30 a.m.	EPA Region I John F. Kennedy Federal Building Boston, Mass. 02203 Telephone: (617) 223-6486
April 17, 1975 9:30 a.m.	EPA Region V 230 S. Dearborn St. Chicago, Illinois Telephone: (312) 553-7736
April 22, 1975 9:30 a.m.	EPA Region IX 100 California St. San Francisco, California 94111 Telephone: (415) 556-2005
April 25, 1975 9:30 a.m.	Washington, D.C. EPA Headquarters Waterside Mall 401 M Street SW Washington, D.C. 20460 Telephone: (202) 426-8847

Dated: March 10, 1975.

RUSSELL E. TRAIN,
Administrator.

SUBCHAPTER D—WATER PROGRAMS

PART 141—NATIONAL INTERIM PRIMARY DRINKING WATER STANDARDS

Sec.

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AUTHORITY: Secs. 1412, 1414, 1415, 1450 of Pub. L. 93-523.

§ 141.1 Applicability.

This subpart sets forth the interim primary drinking water standards required by section 1412 of the Safe Drinking Water Act (Pub. L. 93-523).

§ 141.2 Definitions.

As used in this subpart the term:

(a) "Act" means the Safe Drinking Water Act, Pub. L. 93-523.

(b) "Community water system" means a public water system which serves a population of which 70 percent or greater are residents.

(c) "Contaminant" means any physical, chemical, biological, or radiological substance or matter in water.

(d) "Maximum contaminant level" means the maximum permissible level of a contaminant in water which is delivered to the free flowing outlet of the ultimate user of a public water system.

(e) "Person" means an individual, corporation, company, association, partnership, State, municipality, or Federal agency.

(f) "Public water system" means a system for the provision to the public of piped water for human consumption, if such system has at least fifteen service connections or regularly serves an average of at least twenty-five individuals daily at least three months out of the year. Such term includes (1) any collection, treatment, storage, and distribution facilities under control of the operator of such system and used primarily in connection with such system, and (2) any collection or pretreatment storage facilities not under such control which are used primarily in connection with such system.

(g) "State" means the agency of the State government which has jurisdiction over public water systems. During any period when a State does not have primary enforcement responsibility, the term 'State' means the Regional Administrator, Environmental Protection Agency.

(h) "Supplier of water" means any person who owns or operates a public water system.

§ 141.3 Coverage.

The interim primary drinking water standards under this subpart shall apply to each public water system in a State, except that such standards shall not apply to a public water system which—

(a) Consists only of distribution and storage facilities (and does not have any collection and treatment facilities);

(b) Obtains all of its water from, but is not owned or operated by, a public water system to which such regulations apply;

(c) Does not sell water to any person; and

(d) Is not a carrier which conveys passengers in interstate commerce.

§ 141.11 Maximum contaminant levels for inorganic chemicals.

(a) The following are the maximum contaminant levels for inorganic chemicals:

Contaminant:	*Level (mg/l)*
Arsenic	0.05
Barium	1.
Cadmium	0.010
Chromium	0.05
Cyanide	0.2
Lead	0.05
Mercury	0.002
Nitrate (as N)	10.
Selenium	0.01
Silver	0.05

(b) When the annual average of the maximum daily air temperatures for the location in which the public water system is situated is the following, the cor-

responding concentration of fluoride shall not be exceeded:

Temperature (in F°)	(C°)	Level (mg/l)
50.0 to 53.7	10.0 to 12.0	2.4
53.8 to 58.3	12.1 to 14.6	2.2
58.4 to 63.8	14.7 to 17.6	2.0
63.9 to 70.6	17.7 to 21.4	1.8
70.7 to 79.2	21.5 to 26.2	1.6
79.3 to 90.5	26.3 to 32.5	1.4

The requirements of this paragraph (b) do not apply to public water supplies serving only educational institutions.

§ 141.12 Maximum contaminant levels for organic chemicals.

The maximum contaminant level for the total concentration of organic chemicals, as determined by the carbon chloroform extract method set forth in § 141.24(b), is 0.7 mg/1.

§ 141.13 Maximum contaminant levels for pesticides.

The following are the maximum contaminant levels for pesticides:

(a) Chlorinated Hydrocarbons:

	Level mg/l
Chlordane (cis and trans) (1,2,4,5,-6,7,8,8 - Octachloro - 3a,4,5,7a-tetrahydro-4,7-methanoindan)	0.003
Endrin (1,2,3,4,10,10 - Hexachloro-6,7 - epoxy - 1,4,4a,5,6,7,8,8a-octahydro-1,4-endo, endo-5,8-dimethano naphthalene)	0.0002
Heptachlor (1,4,5,6,7,8,8-Heptachloro-3a,4,7,7a-tetrahydro 4,7-methanoindene)	0.0001
Heptochlor Epoxide (1,4,5,6,7,8,8-Heptachloro - 2,3-epoxy-3a,4,7,7a-tetrahydro-4,7-methanoindan)	0.0001
Lindane (1,2,3,4,5,6-Hexachlorocyclohexane, gamma isomer)	0.004
Methoxychlor (1,1,1-Trichloro-2,2-bis [p-methoxyphenyl] ethane)	0.1
Toxaphene ($C_{10}H_{10}Cl_8$—Technical chlorinated camphene, 67–69% chlorine)	0.005

(b) Chlorophenoxys:

2,4-D (2,4-Dichlorophenoxyacetic acid)	0.1
2,4,5-TP Silvex (2,4,5-Trichlorophenoxypropionic acid)	0.01

§ 141.14 Maximum contaminant level of turbidity.

The maximum contaminant level of turbidity in the drinking water at a representative entry point(s) to the distribution system is one turbidity unit (TU), as determined pursuant to § 141.22, except that five or fewer turbidity units may be allowed if the supplier of water can demonstrate to the State that the higher turbidity does not:

(a) Interfere with disinfection;

(b) Prevent maintenance of an effective disinfectant agent throughout the distribution system; and

(c) Interfere with microbiological determinations.

§ 141.15 Maximum microbiological contaminant levels.

(a) The supplier of water may employ one of two methods to determine compliance with the coliform maximum contaminant levels.

(1) When the supplier of water employs the membrane filter technique pursuant to § 141.21(a) the coliform densities shall not exceed one per 100 milliliters as the arithmetic mean of all samples examined per month; and either

(i) Four per 100 milliliters in more than one standard sample when less than 20 are examined per month; or

(ii) Four per 100 milliliters in more than five percent of the standard samples when 20 or more are examined per month.

(2) (i) When the supplier of water employs the fermentation tube method and 10 milliliter standard portions pursuant to § 141.21, coliforms shall not be present in more than 10 percent of the portions in any month; and either

(A) Three or more portions in one sample when less than 20 samples are examined per month; or

(B) Three or more portions in more than five percent of the samples if 20 or more samples are examined per month.

(ii) When the supplier of water employs the fermentation tube method and 100 milliliter standard portions pursuant to § 141.21(a) coliforms shall not be present in more than 60 percent of the portions in any month; and either

(A) Five or more portions in more than one sample when less than five samples are examined; or

(B) Five or more portions in more than 20 percent of the samples when five samples or more are examined.

(b) The supplier of water shall provide water in which there shall be no greater than 500 organisms per one milliliter as determined by the standard bacterial plate count provided in § 141.21(f).

§ 141.16 Substitution of residual chlorine measurement for total coliform measurement.

(a) The supplier of water may, with the approval of the State, substitute the use of chlorine residual monitoring for not more than 75 percent of the samples required to be taken by § 141.21(b), provided that the supplier of water takes chlorine residual samples at points which are representative of the conditions within the distribution system at the frequency of at least four for each substituted microbiological sample. There shall be at least daily determinations of chlorine residual. Measurements shall be made in accordance with "Standard Methods," 13th Ed., pp 129–132. When the supplier of water exercises the option provided in this paragraph (a), he shall maintain no less than 0.2 mg/l free chlorine in the public water distribution system.

(b) For public water systems serving 4900 or fewer persons, the supplier may, with the approval of the State, make a total substitution of chlorine residual measurement for the samples required to be taken by § 141.21(b): *Provided*, That the supplier of water takes chlorine residual samples at points which are representative of the conditions within the distribution system at the rate of one per day for each microbiological sample required to be taken per month under § 141.21. When the supplier of water exercises the option provided by this paragraph (b) he shall maintain no less than 0.3 mg/l free chlorine in the public water distribution system. Measurements shall be made in accordance with "Standard Methods," 13th Ed., pp 129–132.

§ 141.21 Microbiological contaminant sampling and analytical requirements.

(a) The supplier of water shall make coliform density measurements, for the purpose of determining compliance with § 141.15, in accordance with the analytical recommendations set forth in "Standard Methods for the Examination of Water and Wastewater," American Public Health Association, 13th Edition, pp 662–688, except that only a 100 milliliter sample size shall be employed in the membrane filter technique. The samples shall be taken at points which are representative of the conditions within the distribution system.

(b) The supplier of water shall take coliform density samples at regular intervals throughout the month, and in number proportionate to the population served by the public water system. In no event shall the frequency be less than as set forth below:

Population served:	*Minimum number of samples per month*
25 to 2,500	2
2,501 to 3,300	3
3,301 to 4,100	4
4,101 to 4,900	5
4,901 to 5,800	6
5,801 to 6,700	7
6,701 to 7,600	8
7,601 to 8,500	9
8,501 to 9,400	10
9,401 to 10,300	11
10,301 to 11,100	12
11,101 to 12,000	13
12,001 to 12,900	14
12,901 to 13,700	15
13,701 to 14,600	16
14,601 to 15,500	17
15,501 to 16,300	18
16,301 to 17,200	19
17,201 to 18,100	20
18,101 to 18,900	21
18,901 to 19,800	22
19,801 to 20,700	23
20,701 to 21,500	24
21,501 to 22,300	25
22,301 to 23,200	26
23,201 to 24,000	27
24,001 to 24,900	28
24,901 to 25,000	29
25,001 to 28,000	30
28,001 to 33,000	35
33,001 to 37,000	40
37,001 to 41,000	45
41,001 to 46,000	50
46,001 to 50,000	55
50,001 to 54,000	60
54,001 to 59,000	65
59,001 to 64,000	70
64,001 to 70,000	75
70,001 to 76,000	80
76,001 to 83,000	85
83,001 to 90,000	90
90,001 to 96,000	95
96,001 to 111,000	100
111,001 to 130,000	110
130,001 to 160,000	120
160,001 to 190,000	130
190,001 to 220,000	140
220,001 to 250,000	150
250,001 to 290,000	160
290,001 to 320,000	170

Population served:	Minimum number of samples per month
320,001 to 360,000	180
360,001 to 410,000	190
410,001 to 450,000	200
450,001 to 500,000	210
500,001 to 550,000	220
550,001 to 600,000	230
600,001 to 660,000	240
660,001 to 720,000	250
720,001 to 780,000	260
780,000 to 840,000	270
840,001 to 910,000	280
910,001 to 970,000	290
970,001 to 1,050,000	300
1,050,001 to 1,140,000	310
1,140,001 to 1,230,000	320
1,230,001 to 1,320,000	330
1,320,001 to 1,420,000	340
1,420,001 to 1,520,000	350
1,520,001 to 1,630,000	360
1,630,001 to 1,730,000	370
1,730,001 to 1,850,000	380
1,850,001 to 1,970,000	390
1,970,001 to 2,060,000	400
2,060,001 to 2,270,000	410
2,270,001 to 2,510,000	420
2,510,001 to 2,750,000	430
2,750,001 to 3,020,000	440
3,020,001 to 3,320,000	450
3,320,001 to 3,620,000	460
3,620,001 to 3,960,000	470
3,960,001 to 4,310,000	480
4,310,001 to 4,690,000	490
≥4,690,000	500

(c) (1) When the coliform colonies in a single standard sample exceed four per 100 milliliters (§ 141.15(a)(1)), daily samples shall be collected and examined from the same sampling point until the results obtained from at least two consecutive samples show less than one coliform per 100 milliliters.

(2) When organisms of the coliform group occur in three or more 10 ml portions of a single standard sample (§ 141.15(a)(2)(i)), daily samples shall be collected and examined from the same sampling point until the results obtained from at least two consecutive samples show no positive tubes.

(3) When organisms of the coliform group occur in all five of the 100 ml portions of a single standard sample (§ 141.15(a)(2)(ii)), daily samples shall be collected and examined from the same sampling point until the results obtained from at least two consecutive samples show no positive tubes.

(4) The location at which the check sample was taken pursuant to paragraphs (c) (1), (2) or (3) of this section must not be eliminated from future sampling because of a history of questionable water quality. Check samples shall not be included in calculating the total number of samples taken each month to determine compliance with § 141.15.

(d) When a particular sampling point has been confirmed, by the first check sample examined as directed in paragraphs (c) (1), (2), or (3) of this section, to be in non-compliance with the maximum contaminant levels set forth in § 141.15, the supplier of water shall notify the State as prescribed in § 141.31.

(e) When the maximum contaminant levels set forth in paragraphs (a) (1) or (2) of § 141.15 are exceeded as confirmed by check samples taken pursuant to paragraphs (c) (1), (2), or (3) of this section, the supplier of water shall report as directed in § 141.32(a).

(f) When a particular sampling point has been shown to be in non-compliance with the requirements of § 141.16, water from that location shall be retested within one hour. If the non-compliance is confirmed, the State shall be notified as prescribed in § 141.31. Also, if the non-compliance is confirmed, a sample for coliform analysis must be immediately collected from that sampling point and the results of such analysis reported to the State.

(g) Standard bacteria plate count samples shall be analyzed in accordance with the recommendation set forth in "Standard Methods for the Examination of Water and Wastewater," American Public Health Association, 13th Edition, pp 660–662. Samples taken for the purpose of plate count analysis shall be collected at points which are representative of conditions within the distribution system at a frequency at least equal to 10 percent of the frequency for coliform analysis as directed in paragraph (b) of this section with the exception that at least one sample shall be collected and analyzed monthly.

§ 141.22 Turbidity sampling and analytical requirements.

(a) Samples shall be taken at a representative entry point(s) to the water distribution system at least once per day (at least once per month for supplies using water obtained from underground sources) for the purpose of making turbidity measurements to determine compliance with § 141.14. The measurement shall be made in accordance with the recommendations set forth in "Standard Methods for the Examination of Water and Wastewater," American Public Health Association, 13th Edition, pp. 350–353 (Nephelometric Method).

(b) In the event that such measurement indicates that the maximum allowable limit has been exceeded, the sampling and measurement shall be repeated within one hour. The results of the two measurements shall be averaged, and if the average confirms that the maximum allowable limit has been exceeded, this average shall be reported as directed in § 141.31. If the monthly average of all samples exceeds the maximum allowable limit, this fact shall be reported as directed in § 141.32(a).

(c) The requirements of this § 141.22 shall not apply to public water systems other than community water systems which use water obtained from underground sources.

§ 141.23 Inorganic chemical sampling and analytical requirements.

(a) (1) To establish an initial record of water quality, an analysis of substances for the purpose of determining compliance with § 141.111 shall be completed for all community water systems utilizing surface water sources within one year following the effective date of this subpart. This analysis shall be repeated at yearly intervals.

(2) An analysis for communtiy water systems utilizing ground water sources shall be completed within two years following the effective date of this subpart. This analysis shall be repeated at three-year intervals.

(3) Analyses for public water systems other than community water systems, whether supplied by surface or ground water sources, shall be completed within six years following the effective date of this subpart. These analyses shall be repeated at five-year intervals.

(b) If the supplier of water determines or has been informed by the State that the level of any contaminant is 75 percent or more of the maximum contaminant level, he shall analyze for the presence and quantity of that contaminant at least once per month following the initial analysis or information. If, after conducting monthly testing for a period of at least one year, the supplier of water demonstrates to the satisfaction of the State that the level of such contaminant is stable and due to a natural condition of the water source, he may reduce the frequency of analysis for that contaminant consistent with the requirements of paragraph (a) of this section.

(c) If the supplier of water determines or has been informed by the State that the level of any contaminant listed in § 141.11 exceeds the maximum contaminant level for the substance, he shall confirm such determination or information by repeating the analysis within 24 hours following the initial analysis or information, and then at least at weekly intervals during the period of time the maximum contaminant level for that substance has been exceeded, or until a monitoring schedule as a condition to a variance, exemption or enforcement action shall become effective. The results of such repetitive testing shall be averaged and reported as prescribed in paragraph (d) of this section.

(d) To judge the compliance of a public water system with the maximum contaminant levels listed in § 141.11, averages of data shall be used and shall be rounded to the same number of significant figures as the maximum contaminant level for the substance in question. Each average shall be calculated on a past 12-month moving average basis if less than twelve samples per year are analyzed, and on a past three month moving average basis if twelve or more samples per year are analyzed. In cases where the maximum contaminant level has been exceeded in any one sample, the average concentration shall be calculated on a one-month moving average basis and reported pursuant to § 141.31. If the mean of the samples comprising the one month moving average exceeds the maximum contaminant level, the supplier of water shall give public notice pursuant to § 141.32(a).

(e) The provisions of paragraphs (c) and (d) of this section notwithstanding, compliance with the maximum contaminant level for nitrate shall be determined on the basis of individual analyses rather than by averages. When a level exceeding the maximum contaminant level for nitrate is found, the analyses shall be repeated within 24 hours, and if the mean of the two analyses exceeds the

maximum contaminant level, the supplier of water shall report his findings pursuant to §§ 141.31 and 141.32(a).

(f) Analyses conducted to determine compliance with § 141.11 shall be made in accordance with the following methods:

(1) Arsenic—Atomic Absorption Method, "Methods for Chemical Analysis of Water and Wastes," pp. 95–96, Environmental Protection Agency, Office of Technology Transfer, Washington, D.C. 20460, 1974.

(2) Barium—Atomic Absorption Method, "Standard Methods for the Examination of Water and Wastewater," 13th Edition, pp. 210–215, or "Methods for Chemical Analysis of Water and Wastes," pp. 97–98, Environmental Protection Agency, Office of Technology Transfer, Washington, D.C. 20460, 1974.

(3) Cadmium—Atomic Absorption Method, "Standard Methods for the Examination of Water and Wastewater," 13th Edition, pp. 210–215, or "Methods for Chemical Analysis of Water and Wastes," pp. 101–103, Environmental Protection Agency, Office of Technology Transfer, Washington, D.C. 20460, 1974.

(4) Chromium—Atomic Absorption Method, "Standard Methods for the Examination of water and Wastewater," 13th Edition, pp. 210–215, or "Methods for Chemical Analysis of Water and Wastes," pp. 105–106, Environmental Protection Agency, Office of Technology Transfer, Washington, D.C. 20460, 1974.

(5) Cyanide—Titration or Colorimetric Methods, "Methods for Chemical Analysis of Water and Wastes," pp. 40–48, Environmental Protection Agency, Office of Technology Transfer, Washington, D.C. 20460, 1974.

(6) Lead—Atomic Absorption Method, "Standards Methods for the Examination of Water and Wastewater," 13th Edition, pp. 210–215, or "Methods for Chemical Analysis of Water and Wastes," pp. 112–113, Environmental Protection Agency, Office of Technology Transfer, Washington, D.C. 20460, 1974.

(7) Mercury—Flameless Atomic Absorption Method, "Methods for Chemical Analysis of Water and Wastes," pp. 118–126, Environmental Protection Agency, Office of Technology Transfer, Washington, D.C. 20460, 1974.

(8) Nitrate—Brucine Colorimetric Method, "Standard Methods for the Examination of Water and Wastewater," 13th Edition, pp. 461–464, or Cadmium Reduction Method, "Methods for Chemical Analysis of Water and Wastes," pp. 201–206, Environmental Protection Agency, Office of Technology Transfer, Washington, D.C. 20460, 1974.

(9) Selenium—Atomic Absorption Method, "Methods for Chemical Analysis of Water and Wastes," p. 145, Environmental Protection Agency, Office of Technology Transfer, Washington, D.C. 20460, 1974.

(10) Silver—Atomic Absorption Method, "Standard Methods for the Examination of Water and Wastewater," 13th Edition. pp. 210–215, or "Methods for Chemical Analysis of Water and Wastes," p. 146, Environmental Protection Agency, Office of Technology Transfer, Washington, D.C. 20460, 1974.

(11) Fluoride—Electrode Method, "Standard Methods for the Examination of Water and Wastewater," 13th Edition, pp. 172–174, or "Methods for Chemical Analysis of Water and Wastes," pp. 65–67, Environmental Protection Agency, Office of Technology Transfer, Washington, D.C. 20460, 1974, or Colorimetric Method with Preliminary Distillation, "Standard Methods for the Examination of Water and Wastewater," 13th Edition, pp. 171–172 and 174–176, or "Methods for Chemical Analysis of Water and Wastes," pp. 59–60, Environmental Protection Agency, Office of Technology Transfer, Washington, D.C. 20460, 1974.

§ 141.24 Pesticide and organic chemicals sampling and analytical requirements.

(a) (1) To establish an initial record of water quality, an analysis of substances for the purpose of determining compliance with §§ 141.12 and 141.13 shall be completed for all community water systems utilizing surface water sources within one year following the effective date of this subpart. This analysis shall be repeated at yearly intervals.

(2) An analysis for community water systems utilizing ground water sources shall be completed within two years following the effective date of this subpart. This analysis shall be repeated at three-year intervals.

(3) Analyses for public water systems other than community water systems, whether supplied by surface or ground water sources, shall be completed within six years following the effective date of this subpart. These analyses shall be repeated at five-year intervals.

(b) If the supplier of water determines or has been informed by the State that the level of any contaminant is 75 percent or more of the maximum contaminant level, he shall analyze for the presence and quantity of that contaminant at least once per month following the initial analysis or information. If, after conducting monthly testing for a period of at least one year, the supplier of water demonstrates to the satisfaction of the State that the level of such contaminant is stable and due to a natural condition of the water source, he may reduce the frequency of analysis for that contaminant consistent with the requirements of paragraph (a) of this section.

(c) If the supplier of water determines or has been informed by the State that the level of contaminants set forth in § 141.12 exceeds the maximum contaminant level, he shall confirm such determination or information by repeating the analyses within two weeks following the initial analysis or information. The average of the two analyses, if in excess of the maximum contaminant level, shall be reported as directed in §§ 141.31 and 141.32(a).

(d) If the supplier of water determines or has been informed by the State that the level of any contaminant listed in § 141.13 exceeds the maximum contaminant level for the substance, he shall confirm such determination or information by repeating the analysis within 24 hours following the initial analysis or information, and then at least at weekly intervals during the period of time the maximum contaminant level for that substance has been exceeded, or until a monitoring schedule as a condition to variance, exemption or enforcement action shall become effective. The results of such repetitive testing shall be averaged and reported as prescribed in paragraph (e) of this section.

(e) To judge the compliance of a public water system with the maximum contaminant levels listed in § 141.13, averages of data shall be used and shall be rounded to the same number of significant figures as the maximum contaminant level for the substance in question. Each average shall be calculated on a past 12-month moving average basis if less than twelve samples per year are analyzed, and on a past three month moving average basis if twelve or more samples per year are analyzed. In cases where the maximum contaminant levels of § 141.13 have been exceeded in any one sample, the average concentration shall be calculated on a one-month moving average basis and reported pursuant to § 141.31. If the mean of the samples comprising the one month moving average exceeds the maximum contaminant level, the supplier of water shall give public notice pursuant to § 141.32(a).

(f) Sampling and analyses made to determine compliance with § 141.12 shall be made in accordance with "An Improved Method for Determining Organics in Water by Activated Carbon Absorption and Solvent Extraction," Parts 1 and 2, Buelow, et al., Journal of American Water Works Association, 65: 57, 197 (1973).

(g) Analyses made to determine compliance with § 141.13(a) shall be made in accordance with "Method for Organochlorine Pesticides in Industrial Effluents," MDQARL, Environmental Protection Agency, Cincinnati, Ohio, November 28, 1973.

(h) Analyses made to determine compliance with § 141.13(b) shall be conducted in accordance with "Methods for Chlorinated Phenoxy Acid Herbicides in Industrial Effluents," MDQARL, Cincinnati, Ohio, November 23, 1973.

§ 141.27 Laboratory certification.

For the purposes of determining compliance with §§ 141.21 through 141.24, samples may be considered only if they have been analyzed by a laboratory approved by the State. The approval shall be contingent upon maintenance of proper laboratory methods and technical competence and upon the retention for inspection at reasonable times of analytical results. Approved laboratories shall make periodic reports as required by the State.

§ 141.31 Reporting requirements.

The supplier of water shall report within 40 days following a test, measurement or analysis required to be made by this

subpart, the results of that test, measurement or analysis: *Provided*, That the supplier of water shall report within 36 hours the failure to meet any standards (including failure to comply with monitoring requirements) set forth in this subpart. Reports required to be made by this § 141.31 shall be communicated to the State, except that Federal Agencies shall report to the Regional Administrator.

§ 141.32 Public notification of variances, exemptions and noncompliance with standards.

(a) The supplier of water shall give notice to the persons served by the public water system of any failure on the part of the system to comply with the requirements (including monitoring requirements) of this subpart. The supplier of water shall give the notice required by this § 141.32 not less than once every three months during the life of the noncompliance:

(1) By publication on not less than three consecutive days in a newspaper or newspapers of general circulation serving the area served by such public water system, which newspaper or newspapers shall be approved by the State. With respect to the public water systems operated by Federal Agencies, the newspapers cited in this paragraph shall be approved by the Regional Administrator;

(2) By furnishing a copy thereof to the radio and television stations serving such area as soon as practicable but not later than 36 hours after confirmation of the noncompliance with respect to which the notice is required; and

(3) By inclusion with the water bills of the public water system at least once every three months if the water bills are issued at least once every three months, and with every water bill if they are issued less often. If water bills are not issued, other means of notification acceptable to the State may be used. The notice required by this § 141.32 shall state at least that the public water system fails to monitor, operate the system or provide water which meets all the requirements of this subpart and shall state with particularity those requirements for which there is noncompliance. If a quantitive limitation has been exceeded, the notice shall state what the Federal or State limitation is, and at what level of performance the water supply system has been operating.

(b) The supplier of water shall give notice pursuant to the procedures set forth in paragraph (a) of this section—

(1) When his system has received a variance under section 1415(a)(1) or 1415(a)(2) of the Act, and shall continue the notification process at no less than three month intervals during the life of the variance;

(2) When his system has received an exemption under section 1416 and shall continue the notification process at no less than three month intervals during the life of the exemption; or

(3) When his system has failed to comply with any schedule or control measure prescribed pursuant to a variance or exemption and shall continue the notification process at no less than the three month intervals during the life of the variance and exemption.

§ 141.41 Siting requirements.

Before a person may enter into a financial commitment for or initiate construction of a new public water system or increase the capacity of an existing public water system, he shall—

(a) To the extent practicable, avoid locating part or all of the new or expanded facility at a site which:

(1) Is subject to earthquakes, floods, fires or other man-made disasters which could cause breakdown of the public water system or a portion thereof; and

(2) Is within the floodplain of a 100 year flood;

(b) Notify the State.

§ 141.51 Effective date.

The standards set forth in this subpart shall take effect 18 months after the date of promulgation.

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